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Developing Offshore Wind

A study of public-private collaboration in Waveney, Great Yarmouth and North Norfolk

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Publication date:
2016

Document Version
Publisher's PDF, also known as Version of record

[Link to publication from Aalborg University](#)

Citation for published version (APA):
James, L. (2016). *Developing Offshore Wind: A study of public-private collaboration in Waveney, Great Yarmouth and North Norfolk*. TRU - Tourism Research Unit, Department of Culture and Global Studies, Aalborg University.

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Developing Offshore Wind

A study of public-private collaboration in Waveney,
Great Yarmouth and North Norfolk

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June 2016

TITLE: Developing Offshore Wind. A study of public-private collaboration in Waveney, Great Yarmouth and North Norfolk

PUBLISHER: Department of Culture and Global Studies, Aalborg University

ISBN: 978-87-92305-26-8

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Acknowledgements

This research was funded by the Swedish Research Council as part of the project ‘Small municipalities and large companies - the roles of local government for regional economic resilience’.

The author would like to thank all those individuals and organisations who contributed to the research. The analysis and conclusions presented here are the author’s alone, and do not necessarily reflect the views of any organisation mentioned.

1. Introduction

This report summarises the findings of a study of collaboration between the public and private sector in the East of England in relation to the offshore wind industry. This study is a part of a larger project funded by the Swedish Research Council entitled, 'Small municipalities and large companies - the roles of local government for regional economic resilience' (Så små kommuner och stora företag - betydelsen för ekonomisk hållbarhet). The overall aim of the research project is to investigate the role of local government institutions in supporting regional economic sustainability and resilience, with a focus on the interactions and relations between municipalities located outside major metropolitan areas and large companies. Case studies have been undertaken in Sweden and Norway as well as England.

The research focus is how local government activities in the different countries may influence how resources are harnessed through relations with large companies and anchored in the local milieu, thereby contributing to regional resilience. The empirical studies have focused on the pattern, character and quality of interactions between large companies and the local government where they are located.

The topic of large companies' role for local economic resilience has clear links to the debates that developed from the mid-1970s in connection with large scale processes of de-industrialisation in the advanced industrial economies such as the UK. Many local economies suffered from the loss of manufacturing activities and in the UK this resulted in a widening of economic inequalities with lower unemployment and higher growth rates in the South East of England and London while more peripheral regions struggled economically (Hudson 2000; Storper and Walker, 1989).

In this project the central question is not about preventing plant closures but rather how large companies can contribute to economic growth through collaboration with a variety of public and private organisations. There are different reasons for interactions between municipalities and such companies. These can be required for regulation issues such as planning permission and environmental regulation. Contact between companies and local governments may also concern strategic discussions, cooperation and partnerships for physical and soft infrastructure. The corporate social responsibility strategies of companies may mean support for local facilities and place-based philanthropy.

Structure of the report

The report is structured as follows. Section two sets out the theoretical background to the study. Section three gives background information on the three case study areas and describes the methodology used. Sections four, five, six and seven present findings under the themes of regulation and planning, inward investment, supply chain development and networking, and skills. Conclusions are presented in section eight.

2. Regional economic resilience and adaptation

This study investigates the role of public private collaboration in supporting regional economic resilience and focuses on how local authorities and a variety of other organisations interact with each other and multinational firms in the offshore wind sector.

Traditionally the concept of resilience refers to the ‘rebound’ (Hill et al, 2008) or ‘snapping back’ (Foster, 2007) of a socio-economic system to its prior state after some kind of shock. The notion of regional resilience – ‘the ability of a region to anticipate, prepare for, respond to, and recover from a disturbance’ (Foster, 2007: 14) – has in recent years attracted a great deal of attention within economic geography, regional studies and economic development policy communities (Martin and Sunley 2006; Martin, 2010; Christopherson, Michie and Tyler, 2010; Pike, Daley and Tomaney, 2010; MacKinnon and Driscoll Derickson, 2012). Proponents of the concept argue that it offers a framework to analyse how and why certain regions are able to recover from economic ‘shocks’ such as recessions, technological changes or plant closures - while others struggle to do so.

This project was developed in a Swedish context and it is important to note that in Swedish the word ‘hållbarhet’ is used to indicate both the concept of ‘resilience’ and what in English would be translated as ‘sustainability’. Thus, in this project, economic resilience does not refer to the traditional concept of resilience as elasticity or the ability of a regional economy to ‘bounce back’ in the face of technological changes and economic shocks, such as the financial crisis or the recent drop in oil prices. Rather it refers to the ability to adapt to change so that dynamic economic development can continue. In this sense resilience relates not only to sudden and extensive losses of particular industrial activities but also the continual and gradual adaptation of an economic system over time. Simmie and Martin (2010), for example, argue persuasively that regional economies are complex systems comprising firms, institutions and other actors who are continually adapting to their environment. They suggest that resilience should therefore be defined as the adaptive capacity of a local economy; that is ‘the ability of a region’s industrial, technological, labour force and institutional structures to adapt to the changing competitive, technological and market pressures and opportunities that confront its firms and workforce’ (Simmie and Martin, 2010: 30; see also Pike, Dawley and Tomaney, 2010). The role of institutions and public policy in increasing regional resilience is a relatively under-researched issue. MacKinnon et al (2009) and Hassink (2010), for example, note the general lack of research into the relative significance of public institutions compared to individual actors in creating and/or renewing regional growth.

Christopherson, Michie and Tyler (2010: 6-7) list a number of factors that may impact on the ability of regions to adapt or adjust, including: a strong regional system of innovation; a modern productive infrastructure; a skilled, innovative and entrepreneurial workforce, a supportive financial system and a diversified economic base that is not over-reliant on one industry. These characteristics, however, reflect a focus on ‘endogenous’ processes and actors. Researchers have increasingly recognised the importance of the ways in which places are linked to wider economic processes and structures. Processes of anchoring knowledge and other resources from extra-regional sources are critical for local economic development (Allen, Massey and Cochrane, 1998;

MacKinnon et al. 2009; MacKinnon and Driscoll-Derrick, 2012; Dahlstrom and James, 2012; James, 2012).

Bottom up growth policies

The bottom-up ideal for economic growth policy should be contextualised in the turn of the economic development strategies from the ideas of redistribution and equality to the ambitions to create endogenous growth in all regions. This shift of focus has been explained by references to the economic crisis and the subsequent reduction of public expenditure that took place in many western European states in the late 1980s and early 1990s. Economic decline made the central state's position as the redistributor of wealth and welfare between regions more uncertain, and regions were increasingly required to solve their structural and economic problems on their own. The political shift to a regionalist perspective on economic development drew on the principle that regional development should grow 'from below' and by way of the efforts of the region itself (see for example Lovering 1999).

Recent debates on regional development have tended to shift from structural conditions such as location, the standard of the infrastructure or differences in access to fixed assets (MacLeod 2001). Instead, scholars have emphasised the importance of 'soft factors' as 'habituated routines and conventions' (Amine 2001, p. 1237), or 'institutional thickness' (MacKinnon et al 2002), and economic competitiveness is understood to be dependent on learning and innovation through regional networks (James, 2012). A parallel development has been the 'creative class' concept introduced by Florida (2002), which highlights the importance of attracting individuals in creative and scientific occupations to a region to spur economic development. A common feature of these approaches is that they have focused on the importance of local policymakers developing interactions between individuals and small and medium sized enterprises and creating attractive milieu for creative entrepreneurs.

This project considers the regional economic structure and interactions around the focal organizations. This includes different actors like political organizations, local companies, trade unions, and the third sector. The drivers that lead to joint actions from the viewpoint of the local government may be considered a 'resilience strategy'. The aim for them is to obtain a more robust economic and social platform. It can also be a way to broaden the type of jobs that can be offered locally. The incentives for large firms to take part in joint actions can be linked to Corporate Social Responsibility (e.g. O'Hagan and Harvey, 2000; Matten and Moon, 2008), place-based philanthropy (Glückler and Ries, 2012) and collective entrepreneurship (Rusten and Bryson, 2010). Corporate Social Responsibility (CSR) can be defined as an active form of corporate consciousness and integrated part of a business strategy of the company, whereas collective entrepreneurship refers to a more collective action between more parties; for example, when private firms and public stakeholders work together to improve the local infrastructure or improve the social conditions. Joint projects between local government and large companies might be linked to recruitment (e.g. how to ensure that young people move back after they have finished their education elsewhere, or ways to attract well qualified individuals from other regions or abroad), education (e.g. offering courses to match the specific competence needs of the firms), or

infrastructure (e.g., road or housing projects). These types of collaborative activities are the focus of this report.

3. Case Studies and Methodology

The aim of this study was to investigate the interactions between three local authorities in the East of England (as the nearest equivalent to Swedish and Norwegian municipalities) and the large energy firms which are developing offshore wind farms in the North Sea, together with the wide range of other local and regional organisations that mediate relations between local authorities and the private sector in the English context.

The selected local authorities are Waveney District Council, Great Yarmouth Borough Council and North Norfolk District Council. They were selected due to their involvement in the offshore wind industry. Their location is shown in Figure 1.

Figure 1. North Norfolk District, Great Yarmouth Borough and Waveney District



In comparison to Sweden, the geography of local government in England is rather complicated, with several hierarchies and mixture of public and private sector actors involved in the governance of economic development. Two of the case study districts (North Norfolk and Great Yarmouth) are located in the county of Norfolk, whilst the third (Waveney¹) is in the neighbouring county of Suffolk. The County and District Councils have some distinct statutory responsibilities, as shown in Table 1, but also all have economic development teams and their own economic strategies.

¹ Waveney District Council has shared a Chief Executive, some office staff and services with Suffolk Coastal District since 2008.

Table 1. Non-Metropolitan County and District Council, Selected Responsibilities

	Non-Metropolitan County	Non-Metropolitan District
Education	x	
Housing		x
Planning applications		x
Strategic planning	x	
Transport planning	x	
Passenger transport	x	
Highways	x	
Social Services	x	
Leisure & Recreation		x
Revenue Collection		x
Economic Development	x	x

All three case study districts are part of the New Anglia Local Enterprise Partnership (NALEP) which covers Norfolk and Suffolk. Local Enterprise Partnerships were established in 2011 as successors to the Regional Development Agencies that previously constituted a regional level of governance in England. LEPs are joint local authority-business bodies brought forward by groups of local authorities to support local economic development. The NALEP was established as a company limited by guarantee and is governed by a board whose membership comprises a mixture of public, private and education sector actors. Suffolk County Council is the accountable body while the Chairman is from the private sector. The LEP is responsible for setting strategic economic and transport plans and investment priorities, as well as coordinating funding proposals and supporting project delivery. While a detailed analysis of the local government context is beyond the scope of this report, it is important to note that the case study districts operate in a multi-level governance environment, with shared responsibilities and collaboration across district and county boundaries as well as the public and private sector.

The energy sector and offshore wind in the East of England

The East of England is a major player in the energy sector. Lowestoft (the largest town in Waveney District) and Great Yarmouth have been central to the servicing of the offshore oil and gas industry for the last 45 years and there are currently approximately 150 active platforms in the Southern North Sea. The gas terminal at Bacton on the Norfolk coast processes around 30% of Britain's gas inflow from the North Sea and Europe. Within the NALEP area 7700 people are employed in the sector (NALEP, 2014). Major energy firms such as E.ON, AMEC, ODE, Aker Solutions, Scottish and Southern Energy, Perenco and Halliburton have bases in the region. Together with their location, adjacent to the relatively shallow waters of the North Sea, this

significant expertise and experience of offshore engineering has proven important in the development of offshore wind in the three case study districts.

The construction and operation of offshore wind turbines is a global industry with multinational energy companies bidding for licenses to develop wind farms off the British coast. Overall, the UK has one of the largest installed offshore wind capacities in the world, and much of current capacity is off the coasts of Norfolk, Suffolk and Essex (UK Trade and Investment, 2014). Scroby Sands wind farm was one of the first major offshore wind farm projects in the UK. Located off the coast of Great Yarmouth, 30 turbines were installed and became operational in 2004. Several local companies were involved in the project and this marked the beginning of collaboration between local authorities and the private sector with regard to offshore wind. After the second round of licensing for offshore wind farm development, the Crown Estate awarded development rights for Greater Gabbard and Sheringham Shoal wind farms in 2004. In 2009 Lowestoft was announced as the operations and maintenance base for the Greater Gabbard, and Wells-next-the-Sea as the base for Sheringham Shoal. Construction of both wind farms was completed in 2012. Round three developments, which will include Dudgeon and East Anglia ONE wind farms were announced in 2009.

The actual construction of wind farms that have been approved by national government depends on the investment strategies of multinational energy firms and is also heavily influenced by the renewable energy subsidy regime of the UK government, which has been subject to a number of changes in the last five years. This has led to considerable uncertainty about if and when all the consented wind farms would actually be built. Table 2 shows the status of selected current and planned offshore wind projects off the coast of Norfolk and Suffolk. The ports of Lowestoft (Waveney District), Great Yarmouth and Wells-next-the-sea (North Norfolk District) host the operations and maintenance bases of a number of wind farms and were also involved in the installation phase. Firms in all three districts are part of the supply chain for offshore wind at all stages of development from planning and consent through to operations and maintenance. These activities include environmental and seabed surveys, turbine foundations, supplying and laying cables and electrical systems, handling port logistics and crew transfer, as well as fabrication of a wide range of structures and tools, and the installation and maintenance of the turbines themselves. A full range of support service firms are also located in the three districts providing accommodation, training, business services and so on.

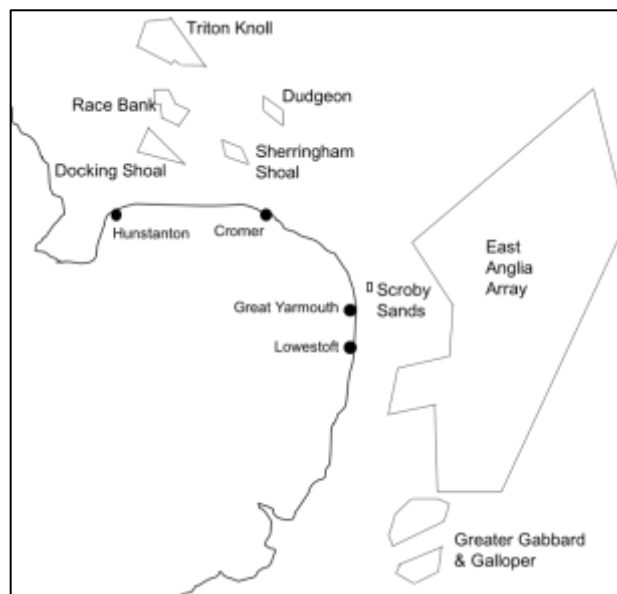
Table 2. Offshore Wind Projects off the East Coast of England

Wind farm	Developer	Capacity MW	Turbines	Status	Operations & Maintenance Base
East Anglia ONE	ScottishPower Renewables	714	89-102	Consented	TBC
Race Bank	DONG Energy	580	91	Consented	TBC
Dudgeon	Statoil/Statkraft	402	67	Consented	Great Yarmouth
Galloper	SSE Renewables/RWE	340	56-68	Consented	Harwich & Lowestoft
Scroby Sands	E.ON	60	30	Operational	Great Yarmouth
Greater Gabbard	SSE Renewables/RWE	504	140	Operational	Lowestoft
Sheringham Shoal	Statkraft/StatoilHydro	317	88	Operational	Wells-next-the-Sea

Source: www.4coffshore.com

Currently operational wind farms are dwarfed by the size of planned developments in the East Anglia Zone, as illustrated in Figure 2, which shows the approximate size and location of key existing and planned offshore wind farms off the coasts of Suffolk and Norfolk. In February 2016 the final decision was taken on investment of £2.5 billion in the first phase of development, East Anglia ONE, and 102 turbines will be constructed (ScottishPower Renewables, 2016). Further development of the entire zone has a potential for more than 1000 turbines (Waveney District Council, n.d.).

Figure 2. Selected Existing & Planned Offshore Wind Farms in the North Sea



This brief overview indicates the size of the potential opportunities for the three case study districts in terms of investment and employment creation. This report explores the ways in which

public and private actors in the three case study areas have collaborated to harness the potential benefits of offshore wind. It focuses on the development of two wind farms that are currently operational (Greater Gabbard, developed by SSE and RWE through Greater Gabbard Offshore Wind, and Sheringham Shoals, developed by Scira Offshore Energy² which is a joint venture between Statkraft and Statoil), as well as the planning and early development phases of the Dudgeon and East Anglia ONE.

Data Collection

The findings reported here are based on an analysis of published sources such as newspaper articles and interviews, reports and strategy documents as well as interviews with a range of individuals involved in the energy sector and economic development in the three case study districts. These included people working in local government at the District, County and LEP level, representatives from sectoral/industry organisations and educational institutions and training providers. In the private sector, employees/owners of firms at all tiers of the offshore wind supply chain were also interviewed, ranging from self-employed contractors to representatives of multinational firms. In total 42 interviews were undertaken.

² Scira Offshore was originally a joint venture between SLP Energy (based in Lowestoft) and Ecoventures. Norse Hydro (Statoil) acquired a 50% stake in 2005, Statkraft took 50% in 2009. The UK Green Investment Bank acquired a 20% stake in 2014 after the wind farm became operational.

4. Inward Investment

As described in the Case Study and Methodology section, the development of offshore wind in the East of England has proceeded in a series of rounds with larger projects located further offshore with each succeeding round. Over time local authorities, in collaboration with regional and national organisations, have developed a series of collaborative initiatives and partnerships to engage with the multinational energy companies developing offshore wind projects in order to secure investment. This is particularly evident since 2009 when the third round of projects were announced.

The Opportunity

The East of England has a long history of involvement in the offshore energy sector. Lowestoft and Great Yarmouth offer deep water port and logistics facilities and have supported development the Southern North Sea gas fields for 45 years and the two towns have an energy sector supply chain numbering several hundred businesses. Offshore renewables therefore represented an attractive opportunity for local firms who might become part of the supply chain, for the ports which might host construction, operations and maintenance activities, and the local population who might benefit from new employment opportunities. In North Norfolk, which is very dependent on tourism, the development of Sheringham Shoals represented an opportunity to diversify the local economy with the creation of permanent skilled jobs associated with operations and maintenance.

Energy is therefore recognised as a key growth sector by local authorities, county councils and the NALFEP. However, the global nature of the offshore wind industry poses challenges for local actors. The firms investing are international and wind turbines are not currently manufactured in the UK. A lack of suitable land and large enough port facilities means that turbines are highly unlikely to be manufactured in the East of England. As two individuals in the private sector put it:

'Great Yarmouth and Lowestoft might have different parts, blades, or something else but again it is unlikely because of the port infrastructure, the land that's available. We can and we are producing some components that we export to Denmark and Germany that go into the turbines and cells and come back to us as a finished product. The big area for us where we are ideally suited is operations and maintenance and asset management.'

For the three local authorities that are the focus of this study, there are three interlinked issues regarding inward investment. The first is to encourage the development of wind farms off the east coast, which involves lobbying national government; for example, in relation to subsidy regimes. The second is to try to secure construction, operations and maintenance bases for projects which do go ahead. The third is to encourage firms in the supply chain to locate or further develop their activities in the area.

The three local authorities had a significant locational advantage with regard to the first and second round wind farms - Scroby Sands, Greater Gabbard and Sheringham Shoals - as Lowestoft, Great

Yarmouth and Wells-Next-The-Sea are some of the closest ports to the offshore sites. However, the round three wind farms in the North Sea are further offshore and could potentially be serviced from other British ports, notably Grimsby and Hull, where a turbine manufacturing and installation facility is also being constructed. Given the global nature of the offshore wind industry, it is not necessarily the case that the turbines installed off the East Anglian coast will be constructed or maintained by a local workforce. These three small local authorities are therefore competing nationally and internationally.

Collaborative Competition

The local authorities and county councils realised that they needed to collaborate in order to win investment and that no one local authority by itself was large enough to ‘go it alone’. This has led to what one interviewee described as a state of ‘collaborative competition’, especially between Lowestoft and Great Yarmouth which have historically been rivals in terms of economic development. However, it was recognised that the supply chain for offshore energy was regional rather than local, and that the local authorities should therefore pool their resources to attract inward investment from multinational firms. Furthermore, as one public sector interviewee argued:

‘The energy sector has galvanised collaboration because people see the opportunities which are quite concentrated geographically in areas where we have high levels of deprivation and the political support is there. There is a real sense of momentum that people want to make a difference’

In order to promote the region, the local authorities joined with the county councils to form the Norfolk and Suffolk Energy Alliance (NSEA) which also includes the region’s energy sector industry body, the East of England Energy Group (EEEGR), and the Chambers of Commerce. The partners jointly fund an Inward Investment Director who provides a single point of contact for potential investors and the alliance provides free and confidential support to new investors, drawing on the councils’ economic development teams and property databases. EEEGR helps to identify potential supply chain partners among their members and, together with OrbisEnergy (a centre for renewable energy, located in Lowestoft) can provide data and insights into local resources. NSEA board members include senior local politicians who help to lobby national government for support. This ensures that a clear and consistent message is communicated.

Whilst there is still an element of competition between the three local authorities, they are differentiated in terms of the port facilities available, which means that they are, to some extent, suited to different activities. For example, manufacturing activities are directed to Great Yarmouth and Lowestoft which have an enterprise zone (see section 5) and port access. The outer harbour at Great Yarmouth can service the latest offshore installation vessels, while the inner harbour in Lowestoft and river harbour in Great Yarmouth have many offshore and engineering companies located nearby and are suited to operations and maintenance activities. The harbour at Wells-Next-The-Sea could not accommodate heavy fabrication but is suited to the deployment of specialist staff during the development and construction phase as well as operations and maintenance.

The local authorities have a history of helping to promote their local areas at international trade shows related to the oil and gas industry. The collaboration through NSEA means that promotion at individual local authority level has almost disappeared. They now market the region as the East of England Energy Zone and the partners pool their resources in order to attend international exhibitions and trade shows such as Offshore Europe, Energy Europe and UK Renewables. The three local authorities have a joint marketing message and exhibition materials. Thus as one public sector interviewee describes:

'We have joint marketing material and a generalised info pack. No individual logos at all. That's a compromise but rather than having five different brands we have just the one. It's important. It's quite hard and other places have said we can't believe that your local authorities are working together. But we've had a long history and the benefit is we have pool of money and are a stronger organisation with a bit of money behind it rather than a little district authority trying to go out on its own.'

The three local authorities have also benefitted from national designation as Centres of Offshore Renewable Engineering (CORE). There are six such centres in England, which are partnerships between national and local government and the relevant LEP. The designation was created to recognise excellent infrastructure and logistics, large amounts of available land for development including deep water access, skilled and available local workforce, experienced supply chain, easy access to Round 1, 2 and 3 offshore wind farms and local government business support. CORE designation means that the three local authorities are showcased as key locations for inward investment gives access to support from the UK Government's Offshore Wind Investment Organisation, which is part of UK Trade and Investment.

A second local public-private partnership is the North Norfolk Renewables group which is a consortium of public and private actors including North Norfolk District Council, Wells Harbour Commissioners and the Holkham and Walsingham Estate companies (which are the largest land owners in the area). Brought together by the opportunity presented by the Sheringham Shoal wind farm the group collaborate to raise issues and promote the area to offshore wind farm companies and their suppliers. The group coordinates over the provision of appropriate infrastructure, sites and premises as well as promoting supply chain opportunities and skills development.

Another key actor which fulfils a mediating role between the local authorities and wind farm developers in the context of inward investment is the East of England Energy Group (EEEGR), which is the industry and skills association for energy producers and their Supply Chain in the region, representing over 300 members across the sector. Their activities are described further in relation to supply chain development and skills in sections 6 and 7.

It is also important to note the role played by other organisations that no longer exist, including the East of England Regional Development Agency (EEDA), and the Urban Regeneration Company (URC) 1st East (both ceased to exist in 2011), which played a key role in promoting Great Yarmouth and Lowestoft to the energy companies that were bidding to develop the East Anglia zone. The URC was supported by Waveney and Great Yarmouth Borough Councils as well as Suffolk and Norfolk County Councils and EEDA and was intended to act as a catalyst for regeneration and economic growth. A condition of its establishment was the development of a

masterplan which included provision for the development of a ‘power park’ with a focus on offshore renewables. This was a plan can be seen as the foundation of the enterprise zone and OrbisEnergy building which followed. At end of 2009 Crown Estate announced that Scottish Power and Vattenfall had won the license to develop East Anglia ONE and Scottish Power used the URC as a means to organise visits to the area to meet the politicians, ports, potential supply chain.

Direct Relationships with Developers

As well as interactions mediated through NSEA and other collaborative vehicles, the local authorities have direct relationships with the developers of the wind farms once investment has proceeded. These interactions range from regulatory issues (such as planning, discussed in section 5) to community engagement initiatives. In relation to the proposed Dudgeon wind farm, for example, councillors are given a quarterly update on progress while there is more frequent interaction at officer level in order to share information and identify potential problems. The wind farm developers have also developed CSR initiatives which benefit the local community in the three local authorities. In relation to Greater Gabbard wind farm, for example, SSE and RWE contributed £150,000 to Suffolk Community Foundation and £300,000 to the Royal National Lifeboat Institution.

Key Findings

It is clear from the interviews undertaken for this project that collaboration between local authorities and other public and private sector actors is central to understanding how the three case study areas have interacted with multinational wind farm developers with regard to inward investment.

Three main objectives related to inward investment drive this collaboration: firstly, encouraging the continued development of offshore wind in the North Sea through coordinated lobbying activities; secondly, securing construction, operations and maintenance bases within the region for projects that do go ahead; and, thirdly, supporting supply chain development and the (re)location of firms in the supply chain within the local areas concerned.

Collaboration between the local authorities has taken the form of formal partnerships such as NSEA and the North Norfolk Renewables Group, which also include County Councils, the NALEP and EEEGR. These partnerships are a reflection of the importance of pooling limited resources at a regional level rather than individual local authorities or towns trying to attract investment alone.

5. Regulation and Planning

Each of the three local authorities deals directly with wind farm developers and their principal contractors when dealing with the regulation and planning issues that arise from the construction of wind farms. One example of this is the infrastructure required to transfer the electricity produced by the wind turbines to the national grid. This is a project that requires the developers to interact intensively with local planning authorities to determine where the cable corridor will be and plan the construction work. Due to the scale of these projects, the county councils planning departments are also involved. In order to coordinate interactions between the different public and private organisations, steering groups were formed so that different teams such as archaeologists and ecologists could be brought in as required.

In addition to these regular planning applications and procedures, each of the three local authorities has made use of special planning and economic development regulation tools in order to facilitate the development of offshore wind and encourage investment by multinational energy companies. The two most important are Enterprise Zones and Local Development Orders.

Great Yarmouth and Lowestoft Enterprise Zone

Enterprise zones are designated areas where businesses benefit from business rate relief of up to £275,000 over five years as well as simplified planning regulations, often achieved through local development orders (described below). They also received national government support to install high speed broadband. Local authorities do not have the power to unilaterally designate these zones. They are a scheme offered by national government and local authorities must work with other public and private partners to produce a bid which is then evaluated centrally.

Waveney Council, through the URC masterplan, had already worked on creating a zone where offshore wind and other renewable energy activities would be encouraged:

'We saw early on that having a particular area designated to attract renewables was a good idea. We called this industrial area the Power Park and we could build a cluster over time. The key is that the local authority owns nearly all of this industrial estate so they had control of the land and the leases. The enterprise zone was a national scheme that came on top of that.' (public sector interviewee)

In 2011, Waveney and Great Yarmouth collaborated on a joint bid for an enterprise zone comprising six sites: two in Great Yarmouth; three in Lowestoft and one in Beccles (part of Waveney District). The bid was led by NSEA, and submitted by the NALEP, and is another example of the kind of collaborative competition that has characterised the development of offshore wind in the two local authorities. As one individual involved describes it:

'When the opportunity came up for an enterprise zone we didn't bid competitively. We sat down and said, look we won't get this on our own so we put up a joint bid. We would obviously like the investment to come to Lowestoft

and they would like it to go to Yarmouth. But because we are offering two very different products with the ports we are not really competing for the same.

The Enterprise Zone was explicitly conceived as a means to support further development of offshore energy related activities and energy is identified in policy documents and brochures as the key sector (New Anglia Local Enterprise Partnership, n.d.). Through their control of key areas of land and properties within the enterprise zone, the local authorities have tried to keep an energy focus in the businesses that lease property within them. The government recently announced that the Enterprise Zone would be extended.

Five of the six Enterprise Zone sites have also been given Assisted Area Status which enables a larger percentage of EU funding to be directed to businesses within them³. Waveney District Council and Great Yarmouth Borough Council worked with the NALEP and the two County Councils to make a case to central government which designates Assisted Areas. This was considered important to encourage inward investment in the context of competition with other CORE locations such as Tyneside, Teesside, Humberside and Merseyside.

Local Development Order

Another means of supporting the development of desired activities within the enterprise zone and in other places is a Local Development Order (LDO) which simplifies the planning procedure within a designated area for certain types of activities. LDOs have been used in all three local authorities in order to encourage development of energy sector activities. Most of the Great Yarmouth and Lowestoft Enterprise Zone sites are covered by such orders and one was also developed in North Norfolk to facilitate the creation of an operations and management base for the Sheringham Shoal wind farm.

Wells-next-the-Sea, the port used to service the Sheringham Shoal turbines is located in a very small town which is located in an Area of Outstanding Natural Beauty (AONB) which means that development is heavily restricted. The local authority therefore used an LDO inland at Egmere to create a 30-hectare site where businesses operating in energy, offshore engineering and ports and logistics sectors are able to construct new buildings without making a planning application or paying planning fees. The development order was approved 2013 and lasts for five years. Scira, the company that operates and maintains the Sheringham Shoal wind farm has its base at Egmere and employs 60 people there. For North Norfolk the LDO offers a means to encourage development in the absence of an Enterprise Zone.

³ The UK referendum on membership of the EU took place as this report was being prepared.

Key Findings

Regulation and planning is one area where all three local authorities have had direct interactions with wind farm developers and their tier one contractors in relation to planning applications and fulfilling requirements for environmental and archaeological surveys among other issues.

However, all three local authorities have also made creative use of planning tools to try to encourage development in the offshore wind industry. In this area collaboration is also evident, with Waveney and Great Yarmouth successfully contributing to a joint bid for an Enterprise Zone and Assisted Area Status. All three local authorities have also used Local Development Orders to encourage inward investment and supply chain development related to offshore wind. These tools are seen as particularly important in the context of competition from other regions of the UK which are also potential locations for offshore wind related economic activity.

6. Supply Chain Development

For each of the three local authorities developing a local supply chain around wind farm development is a priority for economic development and this is another area in which close collaboration between public and private sector actors is evident. Supply chain development is both a challenge and an opportunity for Waveney, Great Yarmouth and North Norfolk. As has already been noted, the offshore wind supply chain is global and this means that local companies face stiff competition to win contracts. Furthermore, no wind turbine manufacture takes place in the region. Nonetheless smaller firms in each of the three local authorities have valuable experience in the oil and gas sector and respondents discussed many examples of firms who have adapted in order to win contracts from the developers and their tier one suppliers:

‘Some companies that have started out just in offshore wind and are solely focused on offshore wind. We have others that have diversified from marine activities, so whether that’s maritime sectors or offshore oil and gas or engineering. We have companies that have an office here for marketing purposes more than anything else to show they have an interest in renewables and others who want to be part of the supply chain of the cluster that we are developing. But there is a huge focus on diversifying and building on expertise and knowledge from other industries whether that is automotive engineering, marine engineering, oil and gas, etc, etc.’

‘Firms like Guardline Marine have done a lot of work adapting their vessels. They reconfigured some of their CTVs [crew transfer vessels] to work more specifically with offshore wind. Other companies such as Icen Marine Services went from fishing into CTVs. They know what sea states you can work in. Very few companies have transitioned from onshore wind to offshore wind. The barrier in skills is ability to go offshore. The logistics understanding, the safety understanding’

From the perspective of economic development, all the local authorities recognise that the operation and maintenance of wind farms represents a longer term opportunity for local firms. As one private sector respondent from an engineering firm argued:

‘Operations and maintenance is a much bigger opportunity for the area than construction of wind farms. I don’t think we could do the installation phase except when the manufactured components are brought to the area. But supplying the vessels and technicians to go offshore is possible. Also people to project manage the work. But mainly afterwards when local companies like us could tender for maintenance work’

Another individual involved in the Sheringham Shoals development described how their expectations of how to harness the benefits of wind farm development had changed over time:

‘I was obsessed with the construction phase. I thought that was the prize. There were 28 boats here at one point working out on the windfarm. There were lorries coming to the depot and it was so busy with people. They were renting houses and filling up hotels. It was like a circus coming to town. But after 18 months they all left. It’s not the construction phase you really want, it’s the operations and maintenance. That’s a lot slower, there’s a lot less happening. But it’s for the long term.’

However, there are a number of challenges which the local authorities recognise and are trying to address in collaboration with other regional actors. One example is the fact that while many firms in the area do have relevant experience, there are variable barriers to entering the offshore wind sector. Some argued that it was easier for smaller tier two or three firms further down the supply chain to move between sectors:

For us, we are fabricating something or installing something. For us it doesn't matter what it is really. It's more technology based differences, rather than skills, and - obviously - regulations'

'A sub-sea company, for example, may be very small but is doing very specialised work. Firms doing confined space, sub-sea work has the required expertise from working in oil and gas, for example. There are lots of transferable skills'

However, local firms also face difficulties in tendering for work from the developers and tier one contractors. For example, one issue with fabricating for construction phase of wind farms is the number of units required in a short time frame. Smaller companies aren't able to produce on the scale required and the company that fabricated components for the original installation is more likely to be asked to do subsequent maintenance. As one interviewee suggested:

'Often local firms are not used to working on such large projects. They might be working at tier 3 and 4. Due to the financial crisis and recession firms stopped applying for ISO accreditations, they cut back on training, they stopped investing in new equipment. So part of the challenge is to get SMEs in shape so that when they do bid for work they are competitive.'

Another key issue is the uneven development patterns and long timescales involved in offshore wind. It takes many years from the developers acquiring a license to develop an offshore wind farm until it is actually constructed and the uncertain regulatory framework in the UK has exacerbated this problem. This makes it difficult for local firms further down the supply chain to make investment decisions and it is also difficult for public sector organisations to know when and what kind of supply chain development initiatives they should work on. As one interviewee put it:

Offshore wind is still a bit 'hurry up and wait' so everybody knows it's a huge opportunity, everybody knows it's happening in pockets around the country, everybody knows that round 3 is just around the corner. But it's been around the corner for the last 3 or 4 years, actually it's still around the corner in terms of manufacturing. 2017 is the forecast for EA Offshore. So what are people going to do in that intermediate period that's going to help them grow, help them get recognised as a potential supplier to offshore wind but also pay their bills at the end of the month and pay their staff? And quite often it's oil and gas, it's decommissioning, it's other engineering projects. It's onshore wind. Completely different sectors.

Furthermore, the supply chain for offshore wind has matured in many ways, both in terms of how contracts are negotiated and the kinds of accreditations that are required to tender for work. When the offshore wind industry began there were no established safety procedures and regulations. In the last few years this has changed and, for example, the Global Wind Organisation (an international association of wind turbine manufacturers and operators) has developed safety standards that have adopted across the industry. For working offshore, contractors require

offshore survival and medical training, together with certifications in working at heights and in confined spaces if they will be working on turbines. In addition, developers and tier one suppliers are increasingly requiring their suppliers to meet ISO standards in order to submit tenders.

The local authorities recognise that small local companies face challenges in successfully tendering for contracts from wind farm developers and tier one suppliers. Whilst the economic development teams in Waveney, Great Yarmouth and North Norfolk have direct relationships with developers such as SSE, RWE and Statkraft they are limited in their ability to act as intermediaries. They therefore also collaborate with other organisations to a) ensure communication between the developers and potential local suppliers and b) help to develop the capabilities of local firms so that they are able to bid for contracts when future projects come to fruition.

East of England Energy Group

One of the most important organisations with whom the local authorities collaborate is the East of England Energy Group (EEEGR) which is the industry and skills association for energy producers and their supply chain in the East of England region, representing over 300 members. EEEGR's mission is 'to be the source of new opportunities and knowledge to enable member companies to strategically grow their businesses' (www.eeegr.com) and, in relation to offshore wind, they pursue this aim through a range of programmes including skills and supply development initiatives and events which bring together developers and tier one suppliers with smaller firms that could potentially tender for contracts in the offshore wind sector.

EEEGR, who work closely with the local authorities, county councils and the NALEP through their membership of NSEA, run a regular programme of events which include the flagship Southern North Sea conference, Special Interest Groups, Breakfast Clubs and Meet the Buyer events provide an opportunity for local firms to meet with tier one firms and developers, such as Siemens and RWE, to learn about upcoming projects and get advice on tendering.

These events were generally very well received by local firms who appreciated gaining access to procurement managers who were able to give them up to date advice and information about project timescales and procurement procedures:

'We want people we can talk to and get work from. So they have to be the right level of speakers and telling something we don't know about to educate us. For instance, they had RWE had a day here for local suppliers about Galloper Wind Farm. Brilliant, that's what we need. To understand what's happening, what the next stages are.'

OrbisEnergy

OrbisEnergy is a five storey building located in Lowestoft (Waveney) overlooking the North Sea, which functions as a flagship development and centre of excellence for the offshore renewables sector. It provides office accommodation, meeting rooms and conference facilities. OrbisEnergy acts as a cluster hub, with many big players in the offshore wind, such as SSE and RWE renting offices there, as well as being an incubator for smaller firms and start-ups who later move to larger

premises of their own. The building is owned by Suffolk County Council and managed on its behalf by a private company, NWES. The consultancy Nautilus is a partner and brings market intelligence and delivers supply chain development programmes, and helps firms with funding applications. Current programmes include the Supply Chain innovation for Offshore Renewable Energy (SCORE) programme which is part financed by the European Regional Development Fund (ERDF) to support small and medium sized enterprises in the East of England. Firms based at OrbisEnergy, such as Scour Prevention Systems, Le Mark and PWE Recruitment have benefitted from previous grants. OrbisEnergy also offers support in relation to the Growing Business Fund managed by the NALEP, Suffolk County Council and Finance East.

OrbisEnergy is a good example of successful public-private partnership. A local engineering firm, SLP, originally had the idea for a centre of excellence which was taken up by the local authority, Waveney, as part of its Power Park plan, and developed by the then East of England Development Agency, which helped secure some EU funding for the project, and Suffolk County Council which owns the building. The majority of tenants are private sector companies in the offshore renewables sector and OrbisEnergy also offers ‘virtual tenancies’ whereby firms have an address and phone number in Lowestoft and can use the facilities for meetings. EEEGR is a strategic partner of OrbisEnergy and every new tenant gets six months’ free membership. Nearly all tenants are members and EEEGR host many of their events there. OrbisEnergy therefore plays a key role in bringing together small and medium sized firms with wind farm developers and larger players. Several interviewees highlighted the role that OrbisEnergy plays in giving smaller firms access to bigger corporate clients and helping them understand what their supply chain needs are. As one private sector interviewee argued:

‘Just being here means we are recognised as being part of that cluster which is where we want to be. Also things like the networking events makes it a lot easier for us. Orbis provides the facilities to sit down and discuss our products. SSE and East Anglia One are tenants. In terms of proximity to clients it doesn’t get much better than that.’

Key Findings

Supply chain development plays a critical role in helping the local economies of the three local authorities adapt to the opportunities presented by the development of offshore wind. Waveney and Great Yarmouth, in particular, have been able to build on the experience of local firms who have a long history of working offshore.

However, there are challenges including ensuring that local firms meet the increasingly stringent conditions required to bid for work, managing the uncertain timescales associated with the construction of wind farms, and helping local firms build relationships with developers and tier one suppliers.

Here the relationship between local authorities and wind farm developers is mediated by collaborative partnerships such as NSEA and membership organisations such as EEEGR, which

plays a key role in bringing together smaller and larger firms in the offshore wind industry through its supply chain initiatives and programme of networking events.

Another key actor is OrbisEnergy, developed through public-private partnership, which has created a hub for offshore renewable activities in the region and actively supports supply chain development.

7. Skills

Ensuring that local people have the skills necessary to benefit from job opportunities in the offshore wind industry is a key focus for all three local authorities, and, as in other areas, they collaborate closely with the county councils, NALEP and EEEGR as well as the local Further Education colleges (Lowestoft College and Great Yarmouth College). They have also worked directly with the wind farm developers and operators on this issue. For example, Scira, which operates the Sheringham Shoals wind farm, worked with local schools in North Norfolk and provided apprenticeships for locals to train as maintenance technicians.

There are a number of interrelated issues and challenges related to skills, ranging from the provision of opportunities for new entrants to train in a relevant area and access apprenticeships, to supporting qualified engineers in other sectors to gain the required certifications to work offshore. In the longer term, the aim is to encourage more children to study Science, Technology, Engineering and Mathematics (STEM) subjects.

Offshore wind is such a new industry that there are no existing specialised training routes into technical roles. As one private sector interviewee pointed out:

'The majority of work being done offshore on wind turbines is being done by mature engineers who have moved from oil and gas or other engineering backgrounds. They have just had specific bolt-on courses on the turbines of particular manufacturers, plus marine transfer and safety courses'.

Many interviewees noted that the technical qualifications required of wind turbine technicians, for example, are largely those acquired through traditional pathways in mechanical, hydraulic, electronic and electrical engineering. Thus, qualified individuals already working in other sectors may have the basic technical skills required to work on wind turbines but must receive training on specific turbine models and also demonstrate the ability to work offshore. This includes both the acquisition of safety certifications and a willingness to work in a harsh and dangerous environment and in an industry that requires geographical mobility between international projects and shift work.

Interviewees from the public and private sector noted that the lack of a clear information about the sector and the kind of roles that are available is a barrier to encouraging young people, in particular, to choose appropriate courses. Many noted a general lack of awareness about current and future career opportunities. Another important issue is the difficulty in predicting demand in offshore wind and precisely the kind of skills that will be required. Given the long timescales and uncertainties about when wind farms will actually be constructed it is difficult for both private and public sector actors to know when they should begin to prepare.

In this context, public-private collaboration around skills has focused on raising awareness of the career opportunities in offshore energy, developing training provision for new entrants and supporting qualified engineers to transfer into the offshore energy sector.

Energy Skills Foundation Programme

The Energy Skills Foundation Programme is a one-year college based NVQ level two pre-apprenticeship course which was developed in collaboration between EEEGR, Lowestoft College, the Nuclear Skills Academy, the Engineering and Construction Industry Training Board (ECITB), Cogent and Great Yarmouth Borough Council together with representatives from key employers in the energy sector. The programme is currently delivered by both Lowestoft and Great Yarmouth Colleges and approximately 16 students are enrolled annually. Students are introduced to the main engineering disciplines within the energy industry and the course includes an introduction to the offshore wind farm industry as well as working safely in processing and engineering environments, principles of electrical technology and workshop skills such as welding and fabrication, among other subjects.

The course is innovative in its approach, which was developed in collaboration with the industry partners. The aim is to engage young people and give them an overview of the energy sector and ensure that they develop the technical skills and employability competencies required to find an apprenticeship within the energy sector. From the employers' perspective, they have access to a pool of apprenticeship candidates who are more certain that they want to work in the industry and have real understanding of what it will involve.

Employer engagement plays a critical role in the programme. The students visit sites such as the Sheringham Shoal control centre and substation and an offshore jack-up barge (used in the installation of offshore wind turbines). Assignments are built around these visits and engineers question the students. Other private sector engagement includes employability training with industry representatives taking part in 'speed dating' interviews where students have ten minute interviews where they get feedback on their CVs and experience responding to interview questions. The success of such events is demonstrated by the fact that some students get job offers as a result. Students are also given access to EEEGR's Southern North Sea Conference where they are able to visit the trade stands and meet industry representatives. They are also required to give presentations to employers as part of the course.

3Sun Pre Apprenticeship Programme

Another pre-apprenticeship programme has been developed by the local firm 3Sun in collaboration with Great Yarmouth College. 3Sun Group employs over 300 people and has offices in Denmark and Norway as well as the UK. Initially providing control and instrumentation services to offshore industries it moved into the installation and maintenance of wind turbines and established an Academy offering technical and vocational training. Most recently it acquired AID Industrial, a specialist in rope access and equipment training which provides rope access training for offshore contractors, among others.

3Sun was interested in developing a pre-apprenticeship programme due to the early specialisation in a normal apprenticeship. This means that students are required to decide on their future career

path at a very young age and this is a risk for employers who must take them on before they have any practical experience of different engineering disciplines or working environment. In comparison to the Energy Skills Foundation Programme, this programme takes two years and leads to a level 3 BTEC qualification and Performing Engineering Operations at level 2. 3Sun offers work experience as well as branded personal protective equipment and clothing for the students. They have also made a donation to engineering facilities at the college. Students undertake a minimum of 12 weeks' work experience with the firm which gives them the chance to experience different areas of the business before they specialise in an apprenticeship.

University of East Anglia, MSc Energy Engineering with Environmental Management

A Master degree in Energy Engineering with Environmental Management was established by the University of East Anglia in 2011 and is now accredited by the Energy Institute. The programme was developed in collaboration with EEEGR and local employers to address the shortage of high calibre graduates in the area of energy engineering. Students cover energy and electrical engineering principles alongside specific modules in Wind, Oil and Gas energy.

EEEGR, through its 'Skills for Energy' programme, supported the establishment of the degree programme and local companies have offered different kinds of support. For example, Perenco sponsored lab equipment, Scour Prevention Systems have sponsored a part time student and many firms, including Scottish Power/Vattenfall and local firm Seajacks have taken students on placements to undertake their dissertation projects. In a similar way to the Energy Skills Foundation Programme, students have the opportunity to engage with employers through site visits, guest lectures and conference sessions.

Skills for Energy (EEEGR)

In addition to their contributions to the pre-apprenticeship and degree programmes discussed previously, EEEGR has a range of other skills initiatives delivered under its core programme 'Skills for Energy'. The programme is led by industry and its primary aim is to 'ensure the ongoing diversity and volume of skilled individuals to move towards securing the future wellbeing of the energy sector' (www.eeegr.com/skills).

One initiative is the Military in Energy which provides help and guidance to individuals who are serving in the military or have left the forces and have relevant skills for the energy sector. EEEGR arranges awareness events which provide information and put ex service personnel in touch with local businesses. They also host a LinkedIn group to help with networking. EEEGR has also collaborated with Suffolk and Norfolk County Councils, and Jobcentre Plus to provide an Energy Employment Advisor. The aim was to upskill work coaches' knowledge of the opportunities in the energy sector and to identify jobseekers with relevant skills and help them secure for job interviews, internships and work experience. EEEGR also contributes to the Energy Skills Network which is a network of education and training providers, including organisations such as the ECITB, that meet regularly to help ensure that provision matches sector needs. The network

includes representatives from the county councils, colleges and other training providers. Finally, EEEGR has also collaborated with Lowestoft College to develop a range of 'Introduction to' courses, which include one on offshore wind. The aim of these one day courses is provide an introduction for new entrants to the industry or those working in support roles who need an overview of the sector.

Key Findings

Skills is a key area of interest for the public sector in relation to the development of offshore wind and local authorities have direct collaboration with large companies on skills issues. Wind farm operators such as Scira have helped with initiatives to encourage school students to study STEM subjects and have developed apprenticeships for maintenance technicians.

However, there has also been considerable public-private collaboration in relation to the development of new pathways into the energy sector through pre-apprenticeship programmes delivered by Lowestoft and Great Yarmouth Colleges, which have had significant support from firms at all levels of the offshore energy supply chain. At the graduate level, the Energy Engineering MSc at the University of East Anglia has helped to tackle a shortage of engineering graduates in the region with relevant experience of the energy sector.

In addition, the public sector has collaborated with organisations such as EEEGR which has a range of initiatives aiming to identify and support skilled jobseekers and current or former military personnel who wish to move into the offshore energy sector.

8. Conclusions

Offshore energy has long been an important economic activity for the local authorities of North Norfolk, Great Yarmouth and Waveney. The offshore wind farms which have been developed off the Norfolk and Suffolk coasts in the last ten years represent a new opportunity for economic development in the energy sector. Whilst the oil and gas industry will continue to be important for the foreseeable future, the eventual depletion of the North Sea basin means that the local economy must continue to take advantage of new opportunities which will secure future economic growth. During the period that this research was undertaken, global oil prices fell to below \$30 per barrel and this had a negative impact on the local supply chain, with some well-known engineering firms that were heavily involved in the offshore energy sector going into administration. These events have served to underline the importance of increasing the resilience and adaptability of local and regional economies, particularly in the context of globalisation. Offshore wind represents one area of diversification for these local economies and has been the focus of this study of public-private collaboration between local authorities and a range of private sector and other organisations and institutions.

Like the oil and gas sector, offshore wind is a global industry driven by multinational energy firms and this means that the three local authorities studied in this research are competing for investment with other localities - nationally and internationally. Whilst they enjoyed a locational advantage with respect to earlier rounds of wind farm construction, with some of the closest ports to wind farms such as Sheringham Shoal and Greater Gabbard, future projects located further out to sea will see the region competing with places such as Hull and Grimsby. At the same time, however, the global nature of the offshore wind industry presents international opportunities for local firms who are involved in projects across Europe and other parts of the world.

In this context, collaboration between the public and private sector with regard to offshore wind has been very important. This research has identified the following key areas of collaborative interactions with large firms:

- Attracting inward investment
- Developing the supply chain
- Infrastructure and planning
- Skills

While the local authorities do have direct relationships with the developers of wind farms and their largest sub-contractors (also often multinationals) interactions are also mediated through range of different organizations and institutions.

In the area of inward investment, it is clear that a strategy of 'collaborative competition' has been adopted, with the local authorities, county councils and NALEP agreeing a joint strategy to encourage investment in the region as a whole rather than individual towns or local authorities working alone. This is evident in the NSEA partnership which also includes EEEGR providing input from private sector members.

Collaboration is also evident in the way that the local authorities have used the planning and regulatory tools available to them to encourage the development of offshore energy related activities through a successful Enterprise Zone bid together with Local Development Orders which offer extra incentives in the form of simplified planning procedures for relevant firms locating within the specified areas of Great Yarmouth, Waveney and North Norfolk. These tools were argued to be very important in the context of national competition for inward investment in the offshore wind industry.

In relation to developing the local supply chain, the activities of EEEGR and OrbisEnergy were highlighted by many interviewees. EEEGR acts as a link between firms at the top and bottom of the supply chain, helping local companies understand the opportunities that offshore wind presents and facilitating networking. OrbisEnergy, an offshore renewables centre located in Lowestoft has provided a physical hub for offshore wind related activity.

Finally, local actors from the public and private sector have successfully collaborated on a number of initiatives designed to help local people gain the skills they need to benefit from employment opportunities in offshore wind. For new entrants, pre-apprenticeship courses developed jointly with industry have provided a pathway for school leavers, while the new Energy Engineering MSc at the University of East Anglia has strengthened the supply of graduate labour in the region. At the same time a number of initiatives, such as the joint funding a Jobcentre Plus advisor in collaboration with EEEGR, have aimed to help qualified individuals to transfer into the offshore energy sector.

In contrast to the Scandinavian context, local government in England enjoys rather less scope to engage directly with large multinational firms, and has fewer resources to direct towards economic development. Local authorities work in a context of multi-level governance involving an array of actors at the local, regional and national scale. The overall picture revealed by this study of Waveney, Great Yarmouth and North Norfolk is one of creative collaboration between the public and private sector to support economic growth and resilience, where local authorities have joined forces in order to succeed on a larger stage.

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